



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,168	07/18/2003	Steven V. Harter	M61.12-0256	2733

27366 7590 03/20/2007

WESTMAN CHAMPLIN (MICROSOFT CORPORATION)  
SUITE 1400  
900 SECOND AVENUE SOUTH  
MINNEAPOLIS, MN 55402-3319

EXAMINER
----------

CAO, PHUONG THAO

ART UNIT	PAPER NUMBER
----------	--------------

2164

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/20/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/623,168	<b>Applicant(s)</b> HARTER, STEVEN V.	
	<b>Examiner</b> Phuong-Thao Cao	<b>Art Unit</b> 2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is in response to Amendment filed on 1/9/2007.
2. Claim 1 has been amended. Currently, claims 1-23 and 25-27 are pending.

### ***Response to Arguments***

3. Applicant's arguments filed on 1/9/2007 have been fully considered but they are not persuasive.

Regarding Applicant's argument that the described data object is not an instantiation of a property of the first object as a second object, this argument is incorrect. Stewart et al. teaches a Rule Engine as a set of software routine for applying Rule language to specific instances of Data (see [0106]) wherein Data is equivalent to properties (see [0039] and [0097]) and specific instances of Data indicates the instantiation of Data (properties) as an object (also see [0097]). Stewart et al. teach an example of validating a property (Billable=T) of object Subscriber [0045] wherein Subscriber is the first object and Data Object holding the current value of (property Billable=T) is the second object. The system of Stewart et al. uses the Data Object as a representation for the validate property because when it needs to retrieve the current value of a property to evaluate and apply rules [0059], it calls the associated Data Object [0039]. In Stewart et al., Property indicates any data or parameters that need to be validated in a database

[0062] wherein each record (row) in database can be considered as an object, and its fields (columns) can be considered as properties of the object.

Regarding Applicant's argument that Stewart et al. fails to teach "applying constraint information to a property of a second object that is an instantiated property of the first object", Stewart et al. teaches the evaluation and application of rules on the *current value of property* (or property) [0059] which is retrieved by accessing the associated Data Object [0039]. In other words, rules are applied on the property (holding current value of each Property) of the Data Object (including two properties: first holding current value of each Property and second holding the current state of each Property) wherein the Data Object is an instantiated Data ([0097] and [0106]) wherein Data can be information or properties of a subscriber (first object) (see [0089] and [0098]).

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 11-14, 20-23 and 25-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Stewart et al. (Publication No US 2003/0191731).

As to claim 1, Stewart et al. teach:

“A computer storage medium having instructions for validating data in a database system” (see [0119]), the instructions comprising:

“instantiating a property of first object as a second object, wherein the second object is a representation of the property in object form” (see [0038] and [0097] wherein the Data Object that holds the current value and the current state of the Property is equivalent to an object instantiation of the Property; also see [0045] wherein Subscriber is the first object and Data Object holding the current value of property (Billable) is the second object; also see [0039] and [0059] wherein the Data Object can be considered as a representation of the validate property because when the system needs to retrieve the current value of a property to evaluate and apply rules [0059], it calls the associated Data Object [0039]);

“obtaining constraint information pertaining to the property to be validated” (see [0036], [0044] and [0047] wherein Rules is equivalent to Applicant’s “constraint information”); and

“applying constraint information to a property of the second object to ascertain if the property is validated” (see [0106] for applying Rule language to specific instances of Data (or properties) (see [0038] and [0097]) and more specifically applying rules to the current value of property [0059] which is a property of the Data Object [0038]; also see [0062] and [0039] for validating in the hierarchical network).

As to claim 2, this claim is rejected based on arguments given above for rejected claim 1 and is similar rejected including the following:

Stewart et al. teach:

“wherein the constraint information comprises a function of the value of the property, and wherein applying constraint information comprises comparing a received value for the property to the constrain information” (see [0064], [0067] and [0082] wherein Rule is equivalent to Applicant’s “constraint information”; also see [0106] and [0107]).

As to claim 3, this claim is rejected based on arguments given above for rejected claim 1 and is similar rejected including the following:

Stewart et al. teach:

“wherein the constraint information comprises a function of status of a second property, and wherein applying constraint information comprises examining the status of the second property” (see [0058] and [0117]).

As to claim 4, this claim is rejected based on arguments given above for rejected claim 3 and is similar rejected including the following:

Stewart et al. teach:

“wherein the status of the second property comprises whether its value can be changed” (see [0058] and [0097] wherein the status of “read-only” is equivalent to the status of the second property as illustrated in Applicant’s claim language).

As to claim 5, this claim is rejected based on arguments given above for rejected claim 4 and is similar rejected including the following:

Stewart et al. teach:

“wherein the status of the second property comprises whether its value is valid” (see [0038] and [0097] for the state of valid/invalid).

As to claim 6, this claim is rejected based on arguments given above for rejected claim 1 and is similar rejected including the following:

Stewart et al. teach:

“setting the value of the property if the constraint information is met” (see [0062] and [0092] wherein committing these changes to Data to the Database is equivalent to setting the value of the property as illustrated in Applicant’s claim language).

As to claim 11, this claim is rejected based on arguments given above for rejected claim 1 and is similar rejected including the following:

Stewart et al. teach:

“obtaining a current value of the property” (see [0039] wherein a Rule Object must obtain the current value of a Property in order to know it as disclosed; also see [0059]).

As to claim 12, Stewart et al. teach:

“A computer storage medium having instructions comprising a framework for validating data in a database system” (see Abstract, Fig. 2 and [0119]), the instructions comprising:

“identifying at least one property of entity to be validated” (see [0046] wherein the disclosure of setting a property to be billable for a validation is equivalent to Applicant’s claim language);

“identifying constraint information to be used for ascertaining if said at least one property is valid” (see [0045], [0047] and [0057] wherein Rules and conditions is equivalent to Applicant’s “constraint information”);

“forming an object of said at least one property upon execution of said instructions in order to perform validation” (see [0038], [0039], [0059], [0097] and [0106]).

As to claim 13, this claim is rejected based on arguments given above for rejected claim 12 and is similar rejected including the following:

Stewart et al. teach:

“identifying a validator of a function of a type of said at least one property, the validator being a class of validators” (see [0036] and [0037] wherein each specialized Rule Object is equivalent to Applicant’s “validator”).

As to claim 14, this claim is rejected based on arguments given above for rejected claim 12 and is similar rejected including the following:

Stewart et al. teach:

“identifying events to be issued during validation” (see [0039] wherein returning error to the caller is an event; also see [0037] for trigger/notification).



As to claim 20, this claim is rejected based on arguments given above for rejected claim 12 and is similar rejected including the following:

Stewart et al. teach:

“wherein identifying constraint information comprises identifying valid criteria for a value of the property” (see [0037] wherein allowed values list is equivalent to valid criteria as illustrated in Applicant’s claim language).

As to claim 21, this claim is rejected based on arguments given above for rejected claim 12 and is similar rejected including the following:

Stewart et al. teach:

“wherein identifying constraint information comprises identifying criteria of when a value of the property can be changed” (see [0047] and [0058]).

As to claim 22, this claim is rejected based on arguments given above for rejected claim 21 and is similar rejected including the following:

Stewart et al. teach:

“wherein the criteria identifies that the value can be changed anytime upon execution of the instruction” (see [0057], [0058] and [0062] for updates and revisions to the Data).

As to claim 23, this claim is rejected based on arguments given above for rejected claim 21 and is similar rejected including the following:

Stewart et al. teach:

“wherein the criteria identifies that the value can be changed as a function of creation of a corresponding entity” (see [0058] wherein value of Currency, Period and Terms is updated or changed when there is any change in Billable status wherein each Billable status can be considered a corresponding entity).

As to claim 25, this claim is rejected based on arguments given above for rejected claim 21 and is similar rejected including the following:

Stewart et al. teach:

“wherein the criteria identifies that the value can be changed as a function of a status value of another property” (see [0058] for the trigger Rule which is equivalent to criteria as illustrated in Applicant’s claim language).

As to claim 26, this claim is rejected based on arguments given above for rejected claim 25 and is similar rejected including the following:

Stewart et al. teach:

“wherein the status value comprises whether said another property is changeable” (see [0038] wherein read-only is the status indicating whether the value of the property is changeable as illustrated in Applicant’s claim language).

As to claim 27, this claim is rejected based on arguments given above for rejected claim 26 and is similar rejected including the following:

Stewart et al. teach:

“wherein the status value comprises whether said another property is valid” (see [0038] wherein valid/invalid is the status indicating where the value of the property is valid as illustrated in Applicant’s claim language).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Delo et al. (US Patent No 6,389,414) in view of Stewart et al. (Publication No US 2003/0191731).

As to claim 12, Delo et al. teach:

“A computer storage medium having instruction comprising a framework for validating data in a database system” (see Abstract, Fig. 2A and [column 6, lines 15-35]), the instruction comprising:

“identifying at least one property of an entity to be validated” (see [column 8, lines 60-65] wherein table is an entity, so each column can be consider as property of the table and the disclosure of determining a column to validate is equivalent to Applicant’s claim language);

“identifying constraint information to be used for ascertaining if said at least one property is valid” (see [column 8, lines 60-67] and [column 9, lines 1-5 and 25-35] wherein validation

data is equivalent to Applicant's "constraint information" and the disclosure of retrieving validation for the column is equivalent to Applicant's claim language).

Delo et al. do not teach "forming an object of said at least one property upon execution of said instruction in order to perform validation".

Stewart et al. teach "forming an object of said at least one property upon execution of said instruction in order to perform validation" (see [0038] wherein Data Object is an object of the Property, as illustrated in Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Delo et al. by the teaching of Stewart et al. to add the function of forming an object of said at least one property upon execution of said instruction in order to perform validation since this object-oriented technique provides an effective way to manipulate data in general.

5. Claims 7-10 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al. (Publication No US 2003/0191731) as applied to claims 1, 6 and 14 above, and further in view of Deffler et al. (US Patent No 6,859,919).

As to claim 7, this claim is rejected based on arguments given above for rejected claim 6 and is similar rejected including the following:

Stewart et al. do not teach "issuing an event indicating the property is valid".

Deffler et al. teach “issuing an event indicating the property is valid” (see [column 6, lines 13-25] wherein the disclosure of providing an indication that the action was successful implies that the property is valid as illustrated in Applicant’s claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stewart et al. by the teaching of Deffler et al. to add the feature of issuing an event indicating the property is valid since issuing an event indicating the property is valid provides the system with an effective and interactive way to communicate occurrences in the validation process and prompt for appropriate action or response.

As to claim 8, this claim is rejected based on arguments given above for rejected claim 1 and is similar rejected including the following:

Stewart et al. do not teach “issuing an exception if the constraint information is not met”.

Deffler et al. teach “issuing an exception if the constraint information is not met” (see [column 6, lines 13-25] wherein “any one of set of semantics” is equivalent to Applicant’s “constraint information” and “indication that the action is failed” is equivalent to Applicant’s “issuing an exception”).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stewart et al. by the teaching of Deffler et al. to add the feature of issuing an exception if the constraint information is not met since issuing an exception if the constraint information is not met provides the system with an effective and interactive way to communicate occurrences in the validation process and prompt for appropriate action or response.

As to claim 9, this claim is rejected based on arguments given above for rejected claim 1 and is similar rejected including the following:

Stewart et al. do not teach “issuing an event indicating the property value is changing”.

Deffler et al. teach “issuing an event indicating the property value is changing” (see [column 5, lines 43-67] and Table One for event “PreEdit” which is equivalent to Applicant’s claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stewart et al. by the teaching of Deffler et al. to add the feature of issuing an event indicating the property value is changing since issuing an event indicating the property value is changing provides the system with an effective and interactive way to communicate occurrences in the validation process and prompt for appropriate action or response.

As to claim 10, this claim is rejected based on arguments given above for rejected claim 1 and is similar rejected including the following:

Stewart et al. do not teach “issuing an event indicating whether the property value is changeable”.

Deffler et al. teach “issuing an event indicating whether the property value is changeable” (see [column 5, lines 43-67] and Table One for event “PreEdit” which is equivalent to Applicant’s claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stewart et al. by the teaching of Deffler et al. to add the feature of issuing an event indicating whether the property value is changeable since issuing an event indicating whether the property value is changeable provides the system with an effective and interactive way to communicate occurrences in the validation process and prompt for appropriate action or response.

As to claim 15, this claim is rejected based on arguments given above for rejected claim 14 and is similar rejected including the following:

Stewart et al. do not teach “wherein the event to be issued comprises a notification that a value of the property is changing”.

Deffler et al. teach “wherein the event to be issued comprises a notification that a value of the property is changing” (see [column 5, lines 43-67] and Table One for event “PreEdit” which is equivalent to Applicant’s claim language; also Stewart et al., [0037] for trigger/notification).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stewart et al. by the teaching of Deffler et al. to add the feature of issuing an event indicating the property value is changing since issuing an event indicating the property value is changing provides the system with an effective and interactive way to communicate occurrences in the validation process and prompt for appropriate actions or response.

As to claim 16, this claim is rejected based on arguments given above for rejected claim 14 and is similar rejected including the following:

Stewart et al. do not teach “wherein the event to be issued comprises a notification that a value of the property is changed”.

Deffler et al. teach “wherein the event to be issued comprises a notification that a value of the property is changed” (see [column 5, lines 43-67] and Table One for event “PostEdit” which is equivalent to Applicant’s claim language; also Stewart et al., [0037] for trigger/notification).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stewart et al. by the teaching of Deffler et al. to add the feature of issuing an event indicating the property value is changed since issuing an event indicating the property value is changing provides the system with an effective and interactive way to communicate occurrences in the validation process and prompt for appropriate actions or response.

As to claim 17, this claim is rejected based on arguments given above for rejected claim 14 and is similar rejected including the following:

Stewart et al. do not teach “wherein the event to be issued comprises a status of the property is changed”.

Deffler et al. teach “wherein the event to be issued comprises a status of the property is changed” (see [column 5, lines 43-67], [column 9, lines 30-38] and Table One wherein event “PreNull” is equivalent to event to be issued comprises a status of the property has changed as



Art Unit: 2164

illustrated in Applicant's claim language since status of the property would be changed from existing to non-existing as considered by the system when a property is destroyed).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stewart et al. by the teaching of Deffler et al. to add the feature of issuing an event indicating a status of the property is changed since issuing an event indicating a status of the property is changing provides the system with an effective and interactive way to communicate occurrences in the validation process and/or prompt for appropriate actions or response.

As to claim 18, this claim is rejected based on arguments given above for rejected claim 17 and is similar rejected including the following:

Stewart et al. as modified teach:

“wherein the status comprises whether the value of the property is changeable” (see [0038] for the state of read-only which indicates whether the value of the property is changeable as illustrated in Applicant's claim language).

As to claim 19, this claim is rejected based on arguments given above for rejected claim 18 and is similar rejected including the following:

Stewart et al. as modified teach:

“wherein the status comprises whether the value of the property is valid” (see [0038] for the state of valid/invalid which indicates whether the value of the property is valid as illustrated in Applicant's claim language).

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong-Thao Cao whose telephone number is (571) 272-2735. The examiner can normally be reached on 8:30 AM - 5:00 PM (Mon - Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2164

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**CHARLES RONES**  
**SUPERVISORY PATENT EXAMINER**

PTC

March 8, 2007

